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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,216	05/24/2001	Dieter H. Nattkemper	100.211US01	2600
27073	7590	08/04/2006	EXAMINER	
LEFFERT JAY & POLGLAZE, P.A.			HSU, ALPUS	
P.O. BOX 581009			ART UNIT	
MINNEAPOLIS, MN 55458-1009			PAPER NUMBER	
			2616	

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,216

Applicant(s)

NATTKEMPER ET AL.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,28-38,43,44 and 74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,28-38,43,44 and 74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 8, 2006 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-6, 8-11, 28-33, 35-38, 43, 44 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over WEGLEITNER et al. in U.S. Patent No. 6,480,487 B1 (newly cited), hereinafter referred to as WEGLEITNER, in view of RAWSON et al. in U.S. Patent No. 6,028,867 (of record), hereinafter referred to as RAWSON.

Regarding claims 1, 3, 28, 30 and 43, WEGLEITNER discloses a system for extending the effective distance of digital subscriber line service, the system comprising: a central office

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terminal (12), the central office terminal including: a data interface (subscriber line card within the central office); and a plurality of line units (16); at least one communication link (18, 22, 22'), coupled to one of the plurality of line units, that carries signals using digital subscriber line service, wherein each communication link is a twisted pair; at least one remote access multiplexer (20), coupled to the at least one communication link, wherein the at least one remote access multiplexer includes a plurality of ports (36, 40, 44) that are adapted to provide digital subscriber line service; the remote access multiplexer adapted to multiplex signals between the plurality of ports and the at least one communication link (see col. 6, line 15 to col. 7, line 4, col. 8, line 39 to col. 9, line 67).

WEGLEITNER differs from the claims, in that, it fails to specifically disclose that the at least one remote access multiplexer is located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located more than 12 kilo-feet from the central office terminal or located between 12 and 30 kilo-feet from the central office terminal. However, WEGLEITNER does indicate that ADSL can transmit data over distances up to 18 kilo-feet at 1.544 Mbps, and up to 12 kilo-feet at 8 Mbps (see col. 6, lines 22-38). And the setup of location of the remote access multiplexer between the central office and the user terminals is well known in the art and can be easily implemented by one of ordinary skill in the art as design choice.

RAWSON et al., from the similar field of endeavor, teaches the setup of remote access multiplexer being located at a distance from the central office terminal so as to provide digital subscriber line service to user terminals that are located more than 12 kilo-feet from the central office terminal (see col. 3, lines 23-33), which can be easily adopted by one of ordinary skill in

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the art to implement into the system of WEGLEITNER to provide the DSL services over an extended distance to further improve the system capability for customer service.

Regarding claims 2 and 29, WEGLEITNER discloses that the central office further includes a telephony interface (subscriber line card within the central office).

Regarding claims 4 and 31, WEGLEITNER discloses that the system further including a splitter at the remote access multiplexer that provides telephony service over the ports of the remote access multiplexer (see col. 7, lines 20-27).

Regarding claims 5 and 32, WEGLEITNER discloses the at least one communication link provides single high speed digital subscriber line service (see col. 9, lines 36-49).

Regarding claims 6, 8, 33 and 35, WEGLEITNER discloses the at least one communication link comprises four communication links and each of the at least one communication links supports up to 8 ports of a corresponding remote access multiplexer (see col. 9, lines 50-58).

Regarding claims 9-11, 36-38 and 44, WEGLEITNER discloses the central office terminal is located at a central office, the central office terminal is subtended from a remote unit of a digital loop carrier, and the central office terminal is a digital loop carrier (see Figure 1).

Regarding claim 74, WEGLEITNER discloses that the remote access multiplexer multiplexes a plurality of POTS signals and DSL signals onto each communication link (see col. 10, line 33 to col. 11, line 12)

5. Claims 7 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WEGLEITNER in view of RAWSON, as applied to claims 1 and 28 above, and further in view

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of GERSZBERG et al. in U.S. Patent No. 5,970,473 (of record), hereinafter referred to as GERSZBERG.

Regarding claims 7 and 34, the system provided from the teaching of WEGLEITNER in view of RAWSON fails to disclose the feature of the remote access multiplexer is powered over the at least one communication link to support lifeline plain old fashion telephone service, which is well known in the art and commonly used in telecommunications field for continuous telephone service in the event of power failure.

GERSZBERG et al., from the similar field of endeavor, teaches the use of a lifeline service (see col. 5, lines 16-20), which can be easily adopted by one of ordinary skill in the art into the system of WEGLEITNER in view of RAWSON to provide continuous telephone service in the event of power failure to further improve the system reliability.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kostan et al., Foley, Silberman et al., Nattkemper et al., and Ewell et al. are further cited to show the feature of utilizing twisted pair for extending DSL service in digital loop carrier system similar to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH



Alpus H. Hsu
Primary Examiner
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